

## CLAIMS:

Having thus described the invention, what is claimed is:

sub a/ 1. An orally compatible composition comprising a peroxide releasing tooth bleaching compound and from 1% to 35% by weight of potassium-containing compound, wherein said potassium-containing compound is present in a safe and effective amount to prevent tooth hypersensitivity from occurring upon application of the tooth bleaching composition to teeth.

2. The orally compatible composition of claim 1, wherein said peroxide releasing compound is selected from the group consisting of carbamide peroxide, sodium perborate, zinc peroxide, calcium peroxide, and magnesium peroxide, and mixtures thereof.

3. The orally compatible composition of claim 1, wherein said potassium-containing compound is potassium nitrate.

4. The orally compatible composition of claim 3, wherein said potassium nitrate is present in the amount of from 1% - 20% by weight.

5. The orally compatible composition of claim 3, wherein said potassium nitrate is present in the amount of from 1% - 8% by weight.

6. The orally compatible composition of claim 3, wherein said potassium nitrate is present in the amount of about 5% by weight.

7. The orally compatible composition of claim 1, wherein said composition is selected from the group consisting of liquids, gels, pastes, creams, ointments and foams.

8. The orally compatible composition of claim 1, wherein said potassium-containing compound is selected from a group consisting of potassium bicarbonate, potassium biphthalate,

potassium bromide, potassium chromate, potassium dichromate, potassium phosphate, potassium sulfate, potassium chromium sulfate, potassium thiocyanate, potassium alum, potassium bitartrate, potassium bromate, potassium carbonate, potassium chlorate, potassium chloroglate, potassium hydroxide, potassium perchlorate, potassium persulfate, potassium oxalate, potassium azide, potassium fluoride, potassium hydrogen sulfate, potassium iodate, potassium chloride, potassium acetate and potassium tartrate.

9. An orally compatible dental bleaching gel comprising

- (a) from 10 to 20 % by weight carbamide peroxide;  
(b) from 10 to 25 % by weight deionized water;  
(c) from 5 to 7 % by weight a potassium-containing compound; and  
(d) from 30 to 65 % by weight glycerin.

10. The gel of claim 9, further comprising sodium hydroxide.

11. The gel of claim 10, further comprising a high viscosity matrix material.

12. The gel of claim 11, wherein said high viscosity matrix material is carboxypolymethylene.

13. The gel of claim 10, further comprising hydroxyalkyl cellulose.

14. The gel of claim 13, further comprising a sweetening agent.

15. The gel of claim 9, further comprising a flavoring agent.

16. The gel of claim 9, wherein said potassium-containing compound is potassium nitrate.

17. The gel of claim 9, wherein said potassium-containing compound is selected from a group consisting of potassium bicarbonate, potassium biphthalate, potassium bromide, potassium chromate, potassium dichromate, potassium phosphate, potassium sulfate, potassium chromium sulfate, potassium thiocyanate, potassium alum, potassium bitartrate, potassium bromate, potassium carbonate, potassium chlorate, potassium chloroglatinate, potassium hydroxide, potassium perchlorate, potassium persulfate, potassium oxalate, potassium azide, potassium flouride, potassium hydrogen sulfate, potassium iodate, potassium chloride, potassium acetate and potassium tartrate.

18. An orally compatible dental bleaching gel comprising

- (a) from 5 to 10 % by weight carbamide peroxide;  
(b) from 5 to 10 % by weight deionized water;  
(c) from 3 to 5 % by weight a potassium-containing compound; and  
(d) from 30 to 40 % by weight glycerin; and  
(e) from 30 to 35 % by weight propylene glycol.

19. The gel of claim 18, further comprising a sweetening agent.

20. The gel of claim 18, further comprising a flavoring agent.

21. The gel of claim 18, wherein said potassium-containing compound is potassium nitrate.

22. The gel of claim 18, wherein said potassium-containing compound is selected from a group consisting of potassium bicarbonate, potassium biphthalate, potassium bromide, potassium chromate, potassium dichromate, potassium phosphate, potassium sulfate, potassium chromium sulfate, potassium thiocyanate, potassium alum, potassium bitartrate, potassium bromate, potassium carbonate, potassium chlorate, potassium chloroglatinate, potassium hydroxide, potassium perchlorate, potassium persulfate, potassium oxalate, potassium azide,

potassium flouride, potassium hydrogen sulfate, potassium iodate, potassium chloride, potassium acetate and potassium tartrate.

23. A method of preventing tooth hypersensitivity in a patient undergoing dental bleaching, comprising the step of:

applying a dental bleaching composition to the teeth comprising a peroxide releasing compound and from 1% to 35% by weight a potassium-containing compound, wherein said potassium-containing compound is present in a safe and effective amount to prevent tooth hypersensitivity upon application of the composition to teeth.

24. The method of claim 23, wherein said potassium-containing compound is potassium nitrate.

25. The method of claim 23, wherein said potassium-containing compound is selected from a group consisting of potassium bicarbonate, potassium biphthalate, potassium bromide, potassium chromate, potassium dichromate, potassium phosphate, potassium sulfate, potassium chromium sulfate, potassium thiocyanate, potassium alum, potassium bitartrate, potassium bromate, potassium carbonate, potassium chlorate, potassium chloroglatinate, potassium hydroxide, potassium perchlorate, potassium persulfate, potassium oxalate, potassium azide, potassium flouride, potassium hydrogen sulfate, potassium iodate, potassium chloride, potassium acetate and potassium tartrate.